

# JAVA.UTIL.GREGORIANCALENDAR CLASS

[http://www.tutorialspoint.com/java/util/java\\_util\\_gregorianCalendar.htm](http://www.tutorialspoint.com/java/util/java_util_gregorianCalendar.htm)

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## Introduction

The **java.util.GregorianCalendar** class is a concrete subclass of **Calendar** and provides the standard calendar system used by most of the world. Following are the important points about **GregorianCalendar**:

- It is a hybrid calendar that supports both the Julian and Gregorian calendar systems with the support of a single discontinuity, which corresponds by default to the Gregorian date when the Gregorian calendar was instituted.
- The Julian calendar specifies leap years every four years, whereas the Gregorian calendar omits century years which are not divisible by 400.

## Class declaration

Following is the declaration for **java.util.GregorianCalendar** class:

```
public class GregorianCalendar
    extends Calendar
```

## Field

Following are the fields for **java.util.GregorianCalendar** class:

- **static int AD** -- This is the value of the ERA field indicating the common era (Anno Domini), also known as CE.
- **static int BC** -- This is the value of the ERA field indicating the period before the common era (before Christ), also known as BCE.

## Class constructors

S.N.	Constructor & Description
1	<b>GregorianCalendar()</b> This constructs a default <b>GregorianCalendar</b> using the current time in the default time zone with the default locale.
2	<b>GregorianCalendar(int year, int month, int dayOfMonth)</b> This constructs a <b>GregorianCalendar</b> with the given date set in the default time zone with the default locale.
3	<b>GregorianCalendar(int year, int month, int dayOfMonth, int hourOfDay, int minute)</b> This constructs a <b>GregorianCalendar</b> with the given date and time set for the default time zone with the default locale.
4	<b>GregorianCalendar(int year, int month, int dayOfMonth, int hourOfDay, int minute, int second)</b> This constructs a <b>GregorianCalendar</b> with the given date and time set for the default time zone with the default locale.
5	<b>GregorianCalendar(Locale aLocale)</b> This constructs a <b>GregorianCalendar</b> based on the current time in the default time zone with the given locale.

6	<b>GregorianCalendar(TimeZone zone)</b> This constructs a GregorianCalendar based on the current time in the given time zone with the default locale.
7	<b>GregorianCalendar(TimeZone zone, Locale aLocale)</b> This constructs a GregorianCalendar based on the current time in the given time zone with the given locale.

## Class methods

S.N.	Method & Description
1	<a href="#"><u>void add(int field, int amount)</u></a> This method adds the specified (signed) amount of time to the given calendar field, based on the calendar's rules.
2	<a href="#"><u>Object clone()</u></a> This method creates and returns a copy of this object.
3	<a href="#"><u>protected void computeFields()</u></a> This method converts the time value (millisecond offset from the Epoch) to calendar field values.
4	<a href="#"><u>protected void computeTime()</u></a> This method converts calendar field values to the time value (millisecond offset from the Epoch).
5	<a href="#"><u>boolean equals(Object obj)</u></a> This method compares this GregorianCalendar to the specified Object.
6	<a href="#"><u>int getActualMaximum(int field)</u></a> This method returns the maximum value that this calendar field could have, taking into consideration the given time value and the current values of the getFirstDayOfWeek, getMinimalDaysInFirstWeek, getGregorianCalendarChange and getTimeZone methods.
7	<a href="#"><u>int getActualMinimum(int field)</u></a> This method returns the minimum value that this calendar field could have, taking into consideration the given time value and the current values of the getFirstDayOfWeek, getMinimalDaysInFirstWeek, getGregorianCalendarChange and getTimeZone methods.
8	<a href="#"><u>int getGreatestMinimum(int field)</u></a> This method returns the highest minimum value for the given calendar field of this GregorianCalendar instance.
9	<a href="#"><u>Date getGregorianCalendarChange()</u></a> This method gets the GregorianCalendar change date.
10	<a href="#"><u>int getLeastMaximum(int field)</u></a> This method returns the lowest maximum value for the given calendar field of this GregorianCalendar instance.
11	<a href="#"><u>int getMaximum(int field)</u></a> This method returns the maximum value for the given calendar field of this GregorianCalendar instance.
12	<a href="#"><u>int getMinimum(int field)</u></a> This method returns the minimum value for the given calendar field of this GregorianCalendar instance.

13	<a href="#"><u>TimeZone getTimeZone()</u></a> This method gets the time zone.
14	<a href="#"><u>int hashCode()</u></a> This method generates the hash code for this GregorianCalendar object.
15	<a href="#"><u>boolean isLeapYear(int year)</u></a> This method determines if the given year is a leap year.
16	<a href="#"><u>void roll(int field, boolean up)</u></a> This method adds or subtracts (up/down) a single unit of time on the given time field without changing larger fields.
17	<a href="#"><u>void roll(int field, int amount)</u></a> This method adds a signed amount to the specified calendar field without changing larger fields.
18	<a href="#"><u>void setGregorianChange(Date date)</u></a> This method sets the GregorianCalendar change date.
19	<a href="#"><u>setTimeZone(TimeZone zone)</u></a> This method sets the time zone with the given time zone value.

## Methods inherited

This class inherits methods from the following classes:

- java.util.Calendar
- java.util.Object